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Issue transferred from the Quality Committee

WG10, Melbourne, February 2000

2000-02-12

Issue raised in the ballot against the ISO 10303 Suppl. Directives

- There is a major issue here that goes beyond Supplementary Directives and addresses (at least) AP Guidelines as well. In both methods documents the requirements for the ARM and clause 4.2 assume the original (and still the only "official") STEP AP Architecture, i.e., that clause 4 defines requirements in terms of the things that domain experts are interested and the information that is associated with those things, where these are described using the terminology of the domain. The role of the ARM diagrams is to assist in the understanding of those requirements.

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Issue text (continued)

- For most current APs, however, clause 4.2 and the ARM diagram (together, increasingly, with EXPRESS schema declarations) present a solution to some set of requirements in the form of a fully detailed and analyzed data structure specification. Thus we end up with application objects that are almost completely unrelated to the interests or terminology of the domain.

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Issue text (continued)

- For example, we get "thing" (now renamed "application_object"!!) in AP221, "item" and "definition" in the Ship APs, etc. With the benefit of 20:20 hindsight I believe that we (SC4) should never have allowed this situation to come about - projects should have been required to follow the AP methodology as-defined or raise issues against the methodology. Projects should not have been able to "do their own thing".

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Issue text (continued)

- However, given what has happened over recent years there maybe a need to recognize the approach of having what are in effect two data structure specifications - one called ARM, and one called AIM - *both* of which are solutions to some now un-stated or partially-stated set of application/domain requirements. If that *is* the accepted way of developing and documenting APs, then it should be accurately documented and described in the SDs, AP Guidelines and elsewhere, so that more appropriate quality assessment metrics can be documented and applied.

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Options

- Update AP Guidelines, Supplementary Directives, etc. to match current practice(s) with respect to AP/ARM development
- Re-focus on the role of an ARM as a statement of end-user requirements, *not* a solution to requirements
- QC's preference is for the second of these
 - ⇒ to be presented discussed at QC workshop tomorrow
 - ⇒ basis is that simpler ARMs (original conception) lead to many fewer mapping table issues

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Summary of QC proposals

from Long Beach meeting January 2000

- Define / solicit a formal syntax specification for the mapping table
 - ⇒ enable publication in electronic form (BNF/WSN)
 - ⇒ incorporate technical changes
- Change documentation format
 - ⇒ no longer a “table”
- Templates for reference paths
 - ⇒ as proposed by ship AP teams
- Guidelines for ARM development
 - ⇒ discourage ARM modelling practices that contribute to mapping issues

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